

WHAT IS CLAIMED IS:

1 1. A method for managing dataflow through a processing system,
2 comprising:
3 gathering writes in a buffer before transmitting a burst of writes over an external
4 bus;
5 monitoring the buffer to determine a number of writes in the buffer and whether
6 the number of writes in the buffer exceed a predetermined threshold; and
7 providing control over writes provided to the buffer in response to the monitored
8 number of writes in the buffer and the predetermined threshold.

1 2. The method of claim 1, wherein the providing control further comprises
2 slowing writes to the buffer when the writes in the buffer exceed the predetermined
3 threshold.

1 3. The method of claim 1, wherein the gathering writes in a buffer before
2 transmitting a burst of writes over an external bus further comprises transmitting a burst
3 of writes over a bus.

1 4. The method of claim 1 further comprising initiating error recovery in
2 response to the writes in the buffer exceeding the predetermined threshold.

1 5. The method of claim 1 further comprising providing an arbitration signal
2 for controlling access to the external bus in response to the comparison of the writes in
3 the buffer to the predetermined threshold.

1 6. The method of claim 1, wherein the providing control over writes
2 provided to the buffer further comprises providing a vector to a register and scanning the
3 register for the vector to determine when to slow writes to the buffer.

1 7. The method of claim 6, wherein the providing a vector to a register further
2 comprises asserting an interrupt line to the register to provide an indication of an almost
3 full state for the buffer in response to the vector.

1 8. The method of claim 1 further comprising clearing the buffer when the
2 writes in the buffer exceed the predetermined threshold.

1 9. The method of claim 1 further comprising providing a timeout signal for
2 indicating when a transaction is not cleared from the buffer within a predetermined
3 amount of time and clearing the buffer and external bus transactions in response thereto.

1 10. The method of claim 1 further comprising determining whether an
2 external interface is hung and clearing the buffer and external bus transactions when an
3 external interface is hung.

1 11. A processing system, comprising:
2 a processor for generating writes over a processor bus;
3 a buffer, coupled to the processor bus, for gathering the writes before transmitting
4 a burst of writes over an external bus; and
5 a bus monitor, coupled to the write buffer, for determining a number of writes in
6 the buffer and comparing the number of writes in the buffer to a predetermined threshold
7 and providing a signal to the processor for causing the processor to slow writes to the
8 buffer when the number of writes in the buffer exceed the predetermined threshold.

1 12. The processing system of claim 11 further comprising an external
2 interface coupled to the buffer, the external interface linking the buffer to the external
3 bus.

1 13. The processing system of claim 11, wherein the external bus comprises a
2 PCI-X bus.

1 14. The processing system of claim 11 further comprising a processor
2 interface coupled to the buffer, the processor interface linking the buffer to a processor
3 bus.

1 15. The processing system of claim 11, wherein the processor initiates error
2 recovery in response to the writes in the buffer exceeding the predetermined threshold.

1 16. The processing system of claim 11, wherein the buffer monitor provides
2 an arbitration signal for controlling access to an external bus in response to the
3 comparison of the writes in the buffer to the predetermined threshold.

1 17. The processing system of claim 11, wherein the buffer monitor comprises
2 bus arbitration and control logic for controlling the movement of data onto the external
3 bus.

1 18. The processing system of claim 17, wherein the buffer bursts the writes
2 onto the external bus.

1 19. The processing system of claim 11 further comprising a register, the buffer
2 monitor providing a vector to the register, the processor scanning the register for the
3 vector to determine when to slow writes to the buffer.

1 20. The processing system of claim 19, wherein the buffer monitor provides
2 the vector by asserting an interrupt line to the register to provide an indication of an
3 almost full state for the buffer.

1 21. The processing system of claim 19, wherein the vector represents an
2 almost full state for the buffer.

1 22. The processing system of claim 11, wherein the buffer monitor monitors
2 the buffer, the external bus, and the processor bus for error conditions.

1 23. The processing system of claim 22, wherein the error conditions comprise
2 anticipated error conditions based upon

1 24. The processing system of claim 11, wherein the buffer monitor provides a
2 buffer pointer to the processor to control the movement of writes from the processor to
3 the buffer.

1 25. The processing system of claim 11, wherein the processor clears the buffer
2 when the writes in the buffer exceed the predetermined threshold.

1 26. The processing system of claim 11, wherein the buffer monitor comprises
2 a timer for providing a timeout signal to the processor when a transaction on the
3 processor bus is not cleared within a predetermined amount of time.

1 27. A processing system, comprising:
2 a memory for gathering writes for burst transmission over an external bus; and
3 a processor, coupled to the memory, the processor being configured for
4 monitoring the memory to determine a number of writes in the buffer and whether the
5 number of writes in the memory exceed a predetermined threshold and providing control
6 over writes provided to the memory in response to the monitored number of writes in the
7 buffer and the predetermined threshold.

1 28. A program storage device readable by a computer, the program storage
2 device tangibly embodying one or more programs of instructions executable by the
3 computer to perform a method for managing dataflow through a processing system, the
4 method comprising:

5 gathering writes in a buffer before transmitting a burst of writes over an external
6 bus;

7 monitoring the buffer to determine a number of writes in the buffer and whether
8 the number of writes in the buffer exceed a predetermined threshold; and

9 providing control over writes provided to the buffer in response to the monitored
10 number of writes in the buffer and the predetermined threshold.

1 29. A processing system, comprising:

2 means for gathering writes for burst transmission over an external bus; and

3 means, coupled to the means for gathering, for monitoring the means for gather to
4 determine a number of writes in the buffer and whether the number of writes in the means
5 for gathering exceed a predetermined threshold and for providing control over writes
6 provided to the means for gathering in response to the monitored number of writes in the
7 buffer and the predetermined threshold.